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EXAMINER

COCKS, JOSIAH C

ART UNIT	PAPER NUMBER
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3749

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/844,564

Applicant(s)

CHANG, MING YU

Examiner

Josiah Cocks

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2, 3, 6, 8, 9, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 3, 6, 8, 9, 13, and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination ("RCE") under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 19, 2006 has been entered.

Per the amendment accompanying the RCE, claims 1, 4, 5, 7, 10, 11, 12 are indicated as cancelled, claims 2, 3, 6, 8, 9 are shown amended with respect to the original patent, and claims 13 and 14 are indicated as new with respect to the original patent.

Withdrawal of Indication of Allowable Subject Matter

2. The Advisory action mailed March 15, 2006 indicated that claims 2, 3, 5, 6, 8, 9, 14, and 15 would be allowed if rewritten in independent form including all of the limitations of the base claim and any intervening. The examiner notes that none of the claims currently presented correspond exactly to those claims that were previously indicated to be allowable. However, regardless, the examiner withdraws the indication of allowable subject matter in light of the reconsideration of the breadth of scope of applicant's claims and reconsideration of the disclosure

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of U.S. Patent No. 5,096,414 to Zellweger, in particular the embodiment shown in Figs. 2 and 3 of that reference. Rejections of applicant's claims follow.

Claim Objections

3. **Claim 14** is objected to because of the following informalities:

In claim 14, second to last line the term "disc" should read "discs".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. **Claim 2** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 2 has been amended to recite that the circular discs diameter are "substantially equal" to that of the striking wheel. However, review of applicant's specification as originally filed reveals that the diameter of the discs is along disclosed as being "equal to that of the striking wheel" (e.g. in U.S. Patent No. 5,897,307, col. 3, lines 25-26) or alternatively "smaller than that of the striking wheel" (e.g. in 5,897,307, col. 3, lines 28-30). There is no support for

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the scope of claim 2 as to a disc diameters that are not "equal" but instead are more broadly "substantially equal".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. **Claims 2, 3, 6, 8, 9, 13, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **U.S. Patent No. 5,096,414 to Zellweger** ("Zellweger") in view of **U.S. Patent No. 5,597,299 to Jon** ("Jon") (both references already of record, see PTO-892 mailed 3/8/2002, part of paper #7).

Zellweger discloses in Figures 1-4 in the same field of endeavor as and similar to lighter described in applicant's claims 2, 3, 6, 8, 9, 13, and 14. In particular, Zellweger shows a disposable lighter, comprising:

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a lighter body (1) for receiving a liquefied fuel therein;
a mounting frame (3, 4) which is sealedly affixed on top of said lighter body, comprising a first (3) and a second (4) supporting wall upwardly extended from two sides of said mounting frame,
a gas nozzle (14),
an ignition device comprising a flint (2) and a striking wheel (6), said striking wheel having a circumferential coarse striking surface (**wheel 6 is toothed, col. 2, line 8**) being positioned right above and in contact with said flint and rotatably mounting between said first and second supporting walls, wherein said striking wheel further comprising two circular discs located at said two sides of said striking surface, each of said circular discs having a circumferential surface and positioned within each of said two gaps formed between said first and second supporting walls and said striking wheel (**as shown in the embodiment of Fig. 3, pin 5 forms two discs that are arranged on each side of the striking surface of wheel 6 and have a circumferential surface and positioned within the gap formed between the side walls 3, 4 and the striking wheel 6**); and
a U-shaped wind shield (9) mounted on said first (3) and second (4) supporting walls to cover said gas nozzle (14) and said first and second supporting walls said wind shield having an all around vertical U-shaped side wall which has a round end portion and two wing portion extending from said round end portion (**see Figs. 2 and 3**), a top wall horizontally and inwardly extending from a top side of said round end portion of said U-shaped side wall and defining a cutout right above said gas nozzle (**see Fig. 3**), and a first (12) and a second (13) L-shaped bent-edge member which are respectively and perpendicularly bent from a top side and an end side of said wing portions (**as shown in Fig. 2 described in col. 2, lines 15-17, the bent portions 12 and 13 are bent in the manner described and are understood to be bent perpendicularly as shown in Fig. 3**), wherein said first and second bent-edge members are respectively extended from said top wall along said top side and said end side of each of said wing portions for fittedly and respectively resting on a horizontal top edge and a vertical rear edge of each of said first and second supporting walls (**the bent portions 12 and 13 as shown in Fig. 2 and 3 would reasonably be understood to rest on the top edges of walls 3 and 4**), a top end corner of each of said wing portions forming a curved corner (**see Fig. 3**) which has a curvature matching with at least a quarter of a circumference of said striking wheel (**see Fig. 3**), so that said striking wheel is sidewardly covered by said two wing portions of said windshield, (**see Fig. 3**).

In regard to at least claims 3 and 14, as show in Fig. 3, the circular discs formed by the pins (5) at both ends of the striking wheel (6) have a diameter that is smaller than that of the striking wheel (6).

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In regard to at least claims 2 and 13, these claims require that the circular discs have a diameter that is "substantially equal" (claim 2) or "equal" (claim 13) to that of the striking wheel. For the purpose of these claims the pins (5) are clearly smaller in diameter than the striking wheel (6) and are not regarded as the discs. Turning to applicant's specification the examiner notes that circular discs (53, 54) are described as being possibly formed integrally with the striking wheel to form a "one-body configuration" (see applicant's specification, i.e. U.S. Patent 5,897,307, p. 5, lines 35-38). In applicant's specification the means for demarcating the wheel and circular discs is understood to be the "glossy circumferential" surface of the circular discs (53, 54) versus the "circumferential coarse striking surface 522" of the striking wheel (see applicant's specification, p. 5, lines 6 and 34 and lines 27-29). However, applicant's claims 2 and 13 have omitted the recitation that the surfaces of the circular discs are "glossy". Instead these claims now merely recite that the discs have circumferential surfaces. Accordingly, giving applicant's claims their broadest reasonable interpretation, they cannot be construed to require any particular type of circumferential surface and the claims read on surfaces of discs that are rough. A striking wheel and two circular discs that are formed integrally as a "one-body configuration" each having a rough surface reads on simply a striking wheel having its entire outer surface rough (such as in Zellweger, striking wheel 6). Therefore, the striking wheel (6) is regarded as an one-body configuration forming a striking wheel (center portion of 6) having integral discs formed at the end (ends of 6) all having a circumferential surface happens to be rough. As such, the diameters of the wheel and discs are "equal" and thus also "substantially equal".

In regard to at least claims 6, 8, and 9, in the embodiment of Fig. 1 of Zellweger the height and radius of curvature of the curved portions of the wind shield (9) are understood to be approximately equal to the striking wheel. In Fig. 2 of Zellweger, the radius of the curvature striking wheel is appears slightly smaller than the radius of curvature of the striking wheel. A person of ordinary skill in the art would reasonably regard the selection of the radius of curvature to be simply a matter of design choice as both configurations are known. Further, the radii of curvature of these Figures in Zellweger appears substantially identical to at least Figs. 6 and 7 of applicant's specification which are described as showing "the radius of the striking wheel 52' is approximately equal to or slightly less than a radius of each of the curved corners 631' and 641'" (specification, col. 6, lines 43-45). Therefore, these recitations are not regarded to patentably distinguish applicant's claims over the structure illustrated in Zellweger.

The following limitations of applicant's independent claims (see below) are not expressly shown or described in Zellweger. However, these limitations are conventional for spark projector lighters having a flint and abrasive strike. For support for this assertion the examiner points to these well known features in Jon.

The following bolded portions refer to portions of the Jon reference:

said mounting frame (6) further having a vertical spring chamber between said first and second supporting walls (**see Fig. 2 and numbered chamber**);

a flint spring (5) being received in said spring chamber;

a gas lever (3) being pivotally mounted between said first and second supporting walls (**see Fig. 2**);

a gas valve with a gas nozzle (2), said gas nozzle being engaged with an end of said gas lever (3B), to permit release gas from an interior of said lighter body via said gas valve (**see col. 3, lines 20-37**);

Therefore, a person of ordinary skill in the art at the time the invention was made would reasonably have understood that the spark projector flint type lighter of Zellweger would include the above noted features shown in Jon in order to create a flame at the gas nozzle.

9. **Alternatively, claims 2 and 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Zellweger in view of Jon and further in view of **U.S. Patent No. 5,364,261 to Huang** ("Huang") (see PTO-892 mailed 3/8/2002, part of paper #7).

The basis of the grounds of rejections of claims 2 and 8 in view of Zellweger and Jon is described above, however, even if *arguendo*, the one-body striking wheel (6) cannot be regarded as forming both a striking wheel and two ends, the examiner now points to the striking wheel shown in Huang.

Huang shows a lighter in the same field of endeavor as applicant's invention and Zellweger. In Huang, the lighter includes a striking wheel (50) that is shown as having a central rough portion and additional outer rough portions (see Fig. 2). Huang does not go into detail as to the relative sizes of these portions of the striking wheel (50), however, despite what may be minor deviations in the diameters, the diameters appear to be at least "substantially equal" as recited.

Accordingly, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the striking wheel of Zellweger to include the multiple sections as illustrated in Huang as the simple substitution of one element for another (i.e. one striking wheel for another) to produce the predictable result of forming a striking wheel to enable the creation of a spark is evidence of obviousness.

10. **Alternatively, claims 3, 6, 9, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Zellweger in view of Jon and further in view of **U.S. Patent No. 2,725,737 to Turner** ("Turner") (newly cited).

The basis of the grounds of rejections of claims 3, 6, 8, 9, and 14 in view of Zellweger and Jon are described above, however, even if *arguendo*, the pins (5) on either side of the striking wheel (6) are not properly regarded as the recited circular discs having diameters smaller than that of the striking wheel, the examiner now points to the circular discs shown in Turner.

Turner shows a flint type lighter in the same field of endeavor as both applicant's invention and Zellweger. In Turner, a striking wheel (3) is arranged between two upstanding supports (4) of a mounting frame in manner substantially identical to Zellweger. Turner also shows a pintle (5) that enables rotation of the striking wheel. Further Turner also shows that circular discs in the form of washers (6) may be arranged between the striking wheel (3) and the supports (4) in order to prevent longitudinal movement of the wheel (3) along the pintle (5) (see col. 1, lines 43-46). These washers are clearly smaller in diameter than the striking wheel (see Fig. 1).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the striking wheel of Zellweger to incorporate the washers/circular discs of Turner for the desirable purpose of preventing longitudinal movement of the striking wheel along its pintle (see Turner, col. 1, lines 43-46).

Reissue Applications

11. Applicant is reminded of the continuing obligation under 37 CFR 1.178(b), to timely apprise the Office of any prior or concurrent proceeding in which Patent No. 5,897,307 is or was involved. These proceedings would include interferences, reissues, reexaminations, and litigation.

Applicant is further reminded of the continuing obligation under 37 CFR 1.56, to timely apprise the Office of any information which is material to patentability of the claims under consideration in this reissue application.

These obligations rest with each individual associated with the filing and prosecution of this application for reissue. See also MPEP §§ 1404, 1442.01 and 1442.04.

Conclusion

12. This action is made non-final. A THREE (3) MONTH shortened statutory period for reply has been set. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Josiah Cocks whose telephone number is (571) 272-4874. The examiner can normally be reached on M-F 8:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven McAllister, can be reached (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jcc
January 30, 2008


JOSIAH COCKS
PRIMARY EXAMINER
ART UNIT 3749